Freshwater production from seawater and atmospheric moisture enabled by a solar-driven water generator

Fact Sheet

Project Information

**SWaG**
Grant agreement ID: 885866

**Funded under**
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

**Total cost**
€ 171 473,28

**EU contribution**
€ 171 473,28

**Coordinated by**
FONDAZIONE ISTITUTO ITALIANO DI TECNOLOGIA
Italy

**Project terminated on 10 September 2021**

**Start date** 1 July 2020

**End date** 30 June 2022

Project description

**Solar-induced desalination and atmospheric water harvesting**

Cryogels, polymeric gels formed after freezing water, can be used for solar-induced desalination and atmospheric water harvesting. The EU-funded SWaG project is working on an easy-to-use portable device incorporating the photothermal cryogel. Specifically, it will develop the photothermal cryogels so they generate potable water in two ways. The first is with the solar desalination achieved through solar-induced evaporation of seawater followed by condensation of the vapour generated. The second is through atmospheric water harvesting through the absorption of water.
vapour followed by water recovery via solar-induced evaporation. The project will serve as a solution for decentralised water production in remote communities and disaster relief applications.

**Fields of science**

*engineering and technology*  
chemical engineering  
separation technologies  
desalination

**Keywords**

Interfacial solar evaporation  
solar-induced desalination  
atmospheric-water harvesting  
point-of-use  
decentralised water technologies  
photothermal cryogels

**Programme(s)**

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions  
H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

**Topic(s)**

MSCA-IF-2019 - Individual Fellowships

**Call for proposal**

H2020-MSCA-IF-2019

See other projects for this call

**Funding Scheme**

MSCA-IF - Marie Skłodowska-Curie Individual Fellowships (IF)

**Coordinator**
FONDAZIONE ISTITUTO ITALIANO DI TECNOLOGIA

Net EU contribution

€ 171 473,28

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Region
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Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 0,00

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Permalink: https://cordis.europa.eu/project/id/885866

European Union, 2023